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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jiewen Luo

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EXAMINER

BENOIT, ESTHER

ART UNIT

PAPER NUMBER

2442

MAIL DATE

DELIVERY MODE

05/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/537,488	LUO ET AL.	
	Examiner	Art Unit	
	ESTHER BENOIT	2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendments

1. Claims 1-4 and 6-14 are pending in this application. Claims 1 has been amended.

Response to Arguments

2. Applicant's arguments, see Remarks, filed 04/21/2009, with respect to the rejection(s) of claim(s) 1 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Duvvury (US 6,917,626 B1).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-7 is rejected under 35 U.S.C. 102(e) as being anticipated by Duvvury (US 6,917,626 B1).

With respect to Claim 1, Duvvury discloses:

- establishing IP data channels via a cluster management device between network devices in a cluster and a network management device by the cluster management device, wherein at least one of the network devices in the cluster is designated as the cluster management device and configured with a public IP address; the network devices in the cluster are configured and updated with private IP addresses and routes by the cluster management device (Col. 9, lines 53-67 and Col. 10, lines 1-7; Abstract);
- managing the network devices in the cluster through said IP data channels via the cluster management device by said network management device (Col. 9, lines 53-67 and Col. 10, lines 1-7; Abstract).

With respect to Claim 2, Duvvury discloses wherein said cluster management device configures and updates other network devices with private IP addresses and routes according to information of topological architecture of the network and device information of the network devices in the cluster (Col. 11, lines 15-27).

With respect to Claim 3, Duvvury discloses wherein said cluster management device configures the other network devices with private IP addresses dynamically (Abstract)

With respect to Claim 4, Duvvury discloses wherein said cluster comprises a plurality of said cluster management devices, and one of the cluster management devices is responsible for managing the configuration and update of private IP

Art Unit: 2442

addresses and routes of the network devices in the cluster as well as the communication between said network management device and the network devices in the cluster; in case said cluster management device fails, one of the other cluster management devices is designated to be responsible for managing the configuration and update of private IP addresses and routes of the network devices in the cluster as well as the communication between said network management device and the network devices in the cluster, according to a predetermined policy (Abstract).

With respect to Claim 6, Duvvury discloses said cluster management device establishes IP data channels via said cluster management device between the network devices in the cluster and said network management device with network address translation technology (Abstract).

With respect to Claim 7, Duvvury discloses:

- designating a device in the network as the cluster management device and configuring the device correspondingly by the network management device (Abstract);
- initiating a topology acquisition process to acquire information of topological architecture of the network within a specified number of hops in the network by the cluster management device (Col. 11, lines 15-27);
- designating candidate devices to be added to the cluster in the topological architecture according to the information of topological architecture

Art Unit: 2442

acquired from the cluster management device, and informing the cluster management device to start the cluster member device addition process by the network management device (Col. 11, lines 15-27);

- adding the designated candidate devices to the cluster and configures the candidate devices correspondingly by the cluster management device, so as to make the candidate devices become member devices of the cluster (Col. 11, lines 15-27);
- after the cluster is established, managing the member devices in the cluster by the cluster management device, and forwarding management messages which are from outside of the cluster and destined to the member devices through standard Network Address Translation (NAT) process to corresponding member devices to process, and processing the management messages according to normal processing process by the member devices (Col. 11, lines 15-27).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2442

6. Claims 8-13 are rejected under 35 U.S.C. as being unpatentable over Duvvury (US 6,917,626 B1), in view of Dinker, and Poston in view of well known practices in the art.

With respect to claims 8-13, the activities recited in claims 8 -13 are well known housekeeping types of activities that are routine in the art and fail to provide any patentable distinction and Official Notice of such is taken. It would have been obvious to have modified the combination of Duvvury, Dinker, and Poston discussed above to include the notorious housekeeping functions as recited in claims 8 - 13 in order to enable, maintain and administer routine management services as was well known at the time.

7. Claim 14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Choi (US 2002/0040397 A1), in view of Dinker et al. (U.S. 7035858).

With respect to Claim 14, Choi discloses an address translation module, adapted to perform network address translation for management messages of member devices ([0030]); Dynamic Host Configuration Protocol (DHCP)-like module, adapted to accomplish allocation of private IP addresses to member network devices ([0048]); a first cluster member management module, which is connected with the address translation module A11, the DHCP-like module A12, and adapted to manage member network devices in a concentrate manner (Figure 3), and to forward management

Art Unit: 2442

messages, which are from outside of the cluster and destined to member devices, to respective member devices to process, so that the member devices can process the management messages according to normal processing process ([0041] a lookup server for managing the plurality of devices);

a second cluster member management module, adapted to accomplish cluster management at the member device end ([0037], a service client for providing access to other devices);

Choi does not disclose a topological information processing module that includes a first topological information processing module, adapted to detect the topological architecture of network and to acquire the information of topological architecture of network within a specified number of hops in the network; and a second topological information processing module, adapted to accomplish detection of adjacent devices and response/forwarding of topology acquisition requests.

However, Dinker discloses a topological information processing module (Col. 3, lines 63-66) that includes a first topological information processing module, adapted to detect the topological architecture of network and to acquire the information of topological architecture of network within a specified number of hops in the network (Col. 4, lines 17-36); and a second topological information processing module, adapted to accomplish detection of adjacent devices and response/forwarding of topology acquisition requests (Col. 7, lines 10-37).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have combined the teachings of Choi with the

Art Unit: 2442

teachings of Dinker to have cluster membership handled by a topology manager in order to have cluster membership configuring and updating according to the topological architecture of the network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esther Benoit whose telephone number is 571-270-3807. The examiner can normally be reached on Monday through Friday between 7:30 a.m and 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2442

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

E.B.

May 4, 2009

/Andrew Caldwell/

Supervisory Patent Examiner, Art Unit 2442